Reviews

WORD PERFECT: LITERACY IN THE COMPUTER AGE. Myron C. Tuman. Pittsburgh: University of Pittsburgh Press, 1992, xi + 150 pp.

Reviewed by Vance Stevens

It is misleading that the title of this book mimics the name of a leading word processing program, as this book is not at all about word processing, except perhaps where word processing merges with fonts and graphics in desktop publishing. This book is about how people's perceptions of literacy have changed over the centuries as social forces work in conjunction with technology, and how these perceptions are changing now.

In particular, this book examines the impact, in a world emerging from an era of print literacy, of computer-based technologies on our concept of literacy. It extrapolates to a world in which networked writers and readers commonly have access to not only text, but to sound, video, and graphics drawn from databases hyper-linked throughout the "docuverse." It gauges the impact on literacy of reading and writing via hypertext, where authors are anonymous, when the purpose of reading and writing is instrumental, when attention spans are short and zapping is second nature, and when users of these technologies have grown distant from the disciplined thinking inherent to print literacy, which Tuman suggests has "exhausted itself" (p. 138) despite its appeal to classicists steeped in its vicissitudes.

The first literate Man excelled in memorization, and though writing may have initially assisted in mnemonics, it eventually obviated the need to memorize. Similarly, printing first sought to replicate the task of manuscript writers, which was to copy out and disseminate standard works. But these failed to enhance the economic progress of the industrial age, when writers tried to "embody a new or personal understanding of the world" which readers sought to comprehend. (p. 18) As the expression of intimate, critical thought came to be appreciated, reading became something that the individual did in isolation to lift himself above the mediocrity of the less literate masses.

More recently, social forces and technological developments are again revolutionizing the way language and communication skills are used and taught. Whereas the paradigmic text in college composition has heretofore been the well-wrought essay, the more catchy newsletter could become a more appro-

priate vehicle for communications skills, or a research report utilizing hypertext links to global databases, eliciting feedback over networks. Reading too will change as readers become accustomed to perusing hyper-linked databases, reading other people's annotations, or annotating documents themselves, to the point that the concept of authorship blurs. Enter the era of on-line literacy. In exploring the tension between them, this book suggests that the two literacies are not just at a cross-roads, but at cross-purposes. On one hand, proponents of print literacy are loathe to relinquish an exquisite literary tradition which stores knowledge as carefully packaged treasure capable of giving pleasure and enlightenment to anyone trained to access it. On the other, proponents of the new literacy regard the former as being elitist, disempowering, and irrelevant in a world where patterns of communication are changing radically.

Tuman argues that when text becomes "everything" (p. 46) — for example, notes, conversation, gestures — then literacy is extended to groups until recently disempowered in the turn-of-the-century model. Instead of trying to make the masses literate according to standards which some may never hope, or wish, for socio-cultural reasons, to achieve, post-modern literacy entails "learning the general system by which different groups use language for their own advantage" (p. 48). Where the "modern" model of literacy aimed to produce intellectuals capable of integrating with the dominant cultural group, the "postmodern" or "collaborative" model aims to produce "that person best able to flourish in a zero-sum world" (p. 48). The result is a concept of literacy "more attuned to sharing information and less attuned to probing the secrets of ourselves or of the universe" (p. 51). However, the new technologies could place us all in a "panopticon," where what is openly communicated on-line also has the possibility of being monitored by those in authority, ushering in the possibility of "collaboration as a new, more insidious form of social control" (p. 103). Hence a dichotomy: are we free and human only when alone with written language (print literacy), or are totalizing forces at work when we are so isolated?

Whereas computers were once seen as extensions of insensitive authoritarianism, Tuman sees that onus shifting to teachers, who in print literacy were considered the refuge of independent, private, insightful thought, helping students stave off conforming influences. From the perspective of the new literacy, teachers placing themselves at the peak of hierarchically structured knowledge are not only authoritarian, but harbor a "corrupted view of language itself" (p. 96).

By undermining the central status of the teacher, the networked classroom "seems to reverse all the negative aspects of teacher-centered education" (p. 84), and leads to discourse akin to conversation as opposed to "authoritative discourse, or language that we are asked to accept because of the status of those who speak it" (p. 90). Thus, advocacy of networked classrooms implies rejection "not just of teacher-centered instruction, but of print literacy itself and, more often than not, the entire social apparatus it supports."

Because it encourages writers to claim ownership of the fruits of individual initiative, print literacy embodies a capitalist social apparatus; thus, choice of literacies is bound up in how society generates wealth. Connectivity attenuates capitalism's authoritarian tendencies, as in corporations where the computer becomes "a virtual coffee pot" around which "all employees can interact with textual information in new, potentially creative and playful ways" (p. 101), where spelling and grammar don't matter. Access to the community of on-line literacy is liberating and democratic: community is stressed rather than authority, expression is valued without recrimination, and "diversity is appreciated, not deprecated" (p. 99).

Networking realizes its fullest potential when users are able to interact not only with each other, but with text. Hypertext assumes that a user needs only a small fraction at any one time of a large body of knowledge organized into related fragments. There are two kinds of access: handcrafted and systems access to inter-related databases (which holds vast economic potential for anyone who can collect and legally market such information, leading to a "pay-per" society, where users pay for each fragment accessed). Handcrafted access provides the presence of an experienced guide, but when the guide (i.e., author) is constantly present, we no longer have hypertext. The alternative can be "hyperchaos": "The other side of being able to jump anywhere is never quite knowing where one is or how one got there" (p. 75).

Authors, on the other hand, give us complex and unified literary text. Readers choose to read the work of an author who is able to distill from a range of information a digestible chunk appealing to the reader. With hypermedia, readers must do this for themselves. Whereas with print literacy, one person's ideas might have been "better" than another's, in on-line literacy, authorship is rendered anonymous through melding into "a sea of intertextuality" (p. 134), and assumed by readers as linkers and annotators, whose entire concept of reading must change accordingly.

It is easy, in this process, to lose historical relations and perspectives. As capitalists take over the knowledge bases, users lose sight of how they evolved and of who owns them, like the food court run by one company that gives diners the impression of having access to all the world's cuisine, or the TV news program that gives viewers the false impression that they have access to all the world's news.

There are obvious implications here for curriculum developers. "No longer will it be possible, for example, to continue to define reading in terms of the traditional comprehension questions based on short readings found on college-entrance examinations when the paradigmatic text becomes the associated collections of screens that an individual user links together while working at a computer terminal" (p. 42). Tuman sees composition moving to "a much richer context than the typed or word-processed essay can provide," that is, "English composition as multimedia composition."

The prime question is not whether hypertext will support print literacy, but whether print literacy will continue at the centre of instruction, as it does now.

If one resorts to effective measures to persuade (e.g., use of graphics, animation, and sound), then "Does not our role as teachers of rhetoric . . . require us to teach our students to use such technologies productively?" (p. 112). Failure to do so means that others will teach students these skills, and language teachers will move "from the center to the periphery of the university curriculum" (p. 115). As evidence, Tuman cites modern composition handbooks that give scant coverage to text preparation, and courses that treat typing as "not . . . having anything substantial to do with literacy" (p. 2). Word processing, except where used to enhance the printed or screen form of text, is typically seen as a means of facilitating writing done in the paradigm of print literacy. For anyone whose vision is limited to use of computers only to produce text, that is, "solely to enhance print literacy, technologically speaking, the computer revolution for all intents and purposes is already over!" (p. 114).

But what happens to students who have "no sustained experience of print?" (p. 69). "We have hardly begun to ask, for example, how giving all writers the ability to produce published forms of their own texts will affect our notion of authorship, or how giving them the ability to integrate graphics into their documents will affect our notion of writing . . . the longer and the more intensely involved we become with a virtual text — the more familiar we become with its inherent flexibility — the less satisfied we are likely to be producing what can only be a mere snapshot of what in its electronic form seems to have a richly multidimensional life of its own" (p. 58). "Print literacy may not be just too difficult but too narrowly focused, too removed not just from oral language but, in its sole appeal to the imagination, too abstract, too puritanical, too removed from the full range of sensual experience that life affords" (p. 126). This is why hypertext will "probably" become "our dominant model of reading." "All of us . . . will zap" (p. 69).

The next question is: Is this liberating, or are we "in danger of making a bad bargain, swapping the great tradition of high-print culture — the thick tomes of richly textured, psychologically probing literary, historical, and scientific masterpieces, works like George Eliot's *Middlemarch,* that for many contain the most detailed self-portraiture that we as humans have ever created — for the glib and glitzy superficiality of MTV" (p. 117). Tuman suggests that the medium has not yet found the "imagination" that will secure its place in the history of media.

I think that on-line literacy will find its place, and it will do so as it attracts thinkers and innovators of the quality of George Eliot. Eliot excelled using available resources, but with hypermedia, she could have done something equally impressive and classic, but different, and as Tuman points out, not necessarily "better" (in the sense that a symphony by Beethoven is not necessarily "better" than a concerto by Bach by virtue of technological improvements in the range of instrumentation). By the same token, Eliot's work in hypermedia would be a classic rooted in its particular place and time. The medium awaits practitioners of such caliber.

Educated people in mid-life today have yet to meet this challenge partly

because even when such people use word processors or CD-ROM database searches at a library, it is to accomplish something within the realm of print literacy in which they have been brought up. For this very reason, the most ardent proponents of on-line literacy are suspect. Having been "nourished in the very world they seem most intent on changing" (p. 93), their cogent arguments developed after having spent the first 40 years of their lives "mining the vast cognitive and psychological resources of print literacy" (p. 80), they are recent converts to the medium. Yet their ability to straddle worlds engenders versatility — it is the students of today who have not enough immersion in the old world who are in trouble. Accordingly, the task of establishing "imagination" through historical perspective "must begin immediately, while the most highly literate among us still have solid contact with both worlds" (p. 138).

Although Tuman decries the market-orientation of the new order, this book could not have been created without a strong commitment on the part of its publishers and author to the ongoing success of print literacy. Ironically, this book is an excellent example of the finest advantages of print literacy, of the ability of an author to engage a reader one-on-one. Tuman is the expert guide that hypermedia lack; he has organized a substantial body of information around a central thesis which he drives home to a reader who probably appreciates this work in silent, isolated reading. Such a reader should be making him or herself more literate in the process by the standards of print literacy which hold that literate people plow persistently idea by idea through such material in search of higher truth. If Tuman's contentions hold true, then this book should be one of the last of a vanishing breed of such works, just as Tuman should be one of the last identifiable authors.

The one disappointment in this book is its index. This is all the more surprising given the following analogy comparing the associative structure of on-line literacy with the critical thinking of print literacy: "While the table of contents of a traditional book represents an abstract of its actual linear structure, the index represents its associative potential" (p. 67). In the index of this book, proper names predominate, and the other "nodes" are too limited to be "associative." Someone who feels about associative linking as Tuman professes to do should have been able to come up with a better index. Another slight hiccup is that the final chapter of the book is entitled "Imagining the Future," yet the chapter is headed on all but its first page, "Imaging the Future." Given the role of image in on-line literacy, and Tuman's subtle play with words, I wonder if this was intentional.

Tuman's wordplay will do in conclusion: Word perfect, or the utopian promise of literacy . . . lies not in technological innovations themselves, no matter how spectacular and how liberating they may seem, but in the same practical task that in its undistorted form has motivated reading and writing in the age of print, that of remaking both our world and ourselves in accord with an imagined rendering, a verbal projection, of what we as human beings are capable of becoming. This is a vision of literacy on-line as an extension, not a

rejection, of the literacy of print" (p. 130). The irony of this book is that Tuman the author shows himself to be an articulate guide who has mastered and, in publishing, exploited the literacy he castigates. It would be interesting to see how his work performs as hypermedia; meanwhile, print-literates will thoroughly enjoy this author-guided version.

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